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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,330	01/10/2002	Vladimir Dubinsky	414-13238-CIP	9215
24923	7590	03/01/2004	EXAMINER	
PAUL S MADAN MADAN, MOSSMAN & SRIRAM, PC 2603 AUGUSTA, SUITE 700 HOUSTON, TX 77057-1130			MCCLOUD, RENATA D	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,330

Applicant(s)

DUBINSKY ET AL.

Examiner

Renata McCloud

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-30 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/28/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the amendment filed 28 November 2003, the following has occurred: Claims 10, 16, and 26 have been amended.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 28 November 2003 was has been received.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10-14 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoyle et al (US 5,043,952):

Claims 10 and 16: An apparatus and method for performing acoustic investigations of a subsurface geological formation penetrated by a borehole comprising: a longitudinally extending body (e.g. Fig. 1: 10) conveyed in the borehole (e.g. Fig. 1: hole around 10); an acoustic transmitter (Fig. 4: 10a) supported by the body

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(e.g. Fig. 4:10), the transmitter generating acoustic signals in the body, the borehole and the subsurface formations; an acoustic receiver (e.g. Fig. 4:10d) spaced apart from the transmitter (e.g. Fig. 4:10a) and supported by the body for receiving the acoustic signals; and an attenuator (e.g. Fig. 4:20c comprised of a portion of 20 and 6 mass rings; Col. 8:19-26) located on a substantially cylindrical portion of the body having an inner diameter (e.g. Fig. 4:inside of 20c) and an outer diameter (e.g. Fig. 4: outside of 20c), between the acoustic transmitter (e.g. Fig. 4:10a) and the acoustic receiver (e.g. Fig. 4: 10d) for attenuating the acoustic signals in the body (Fig. 6:20) within a predetermined frequency range (e.g. Col. 8: 22); wherein the attenuator comprises a plurality of spaced-apart masses (e.g. Fig. 4:20c; Fig. 6:20c; Col. 8:13-26) having a predetermined spacing, mass and length, attached to an external surface of an outer wall of the cylindrical portion of the body (e.g. Fig. 4:10c; Col. 5:13-16).

Claims 12, 17: attenuator comprises a plurality of spaced apart masses wherein the predetermined frequency range comprises 10khz to 20 kHz (e.g. Col. 8:22-26).

Claims 13, 18: the attenuator comprises a plurality of spaced apart masses wherein material of the masses is selected from the group consisting of steel rings and tungsten rings ((e.g. Fig. 4: 6 steel mass loading rings).

Claim 14: the attenuator comprises a plurality of spaced apart masses wherein the plurality of masses is between six and ten (e.g. Fig. 4: 6 steel mass loading rings).

Claims 19: conveying the logging tool on a drilling tubular (e.g. Fig. 1: string extending from truck).

Claim 20: performing acoustic investigations during drilling of the wellbore (e.g. Col. 1:9-14).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoyle et al as applied to claim 10 above, in view of Haugen (U.S. Patent 6,024,169).

Claim 11: Hoyle et al teach the limitations of claim 10. Referring to claim 11, they do not teach the longitudinal extending body is conveyed on a drilling tubular having a drill bit therein for drilling the borehole, the drilling tubular consisting of a drill string and coiled tubing. Haugen teaches a longitudinal extending body (Fig. 1: 10) conveyed on a drilling tubular having a drill bit therein for drilling the borehole (Fig. 1: W), the drilling tubular consisting of a drill string and coiled tubing (e.g. Col. 18:12-17). It would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the apparatus taught by Hoyle et al to use coiled tubing to convey a longitudinal extending body as taught by Haugen. The advantage of this would be the ability to drill through the borehole.

7. Claims 26-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoyle et al (US 5,043,952) in view of Gill et al (US 5,852,262).

Claim 26: Hoyle et al teach a method for performing acoustic investigations of a subsurface geological formation penetrated by a borehole comprising: a longitudinally extending body (e.g. Fig. 1: 10) conveyed in the borehole (e.g. Fig. 1: hole around 10); an acoustic transmitter (Fig. 4:10a) supported by the body (e.g. Fig. 4:10), the transmitter generating acoustic signals in the body, the borehole and the subsurface formations; an acoustic receiver (e.g. Fig. 4:10d) spaced apart from the transmitter (e.g. Fig. 4:10a) and supported by the body for receiving the acoustic signals; and an attenuator (e.g. Fig. 4:20c comprised of a portion of 20 and 6 mass rings; Col. 8:19-26) located on a substantially cylindrical portion of the body having an inner diameter (e.g. Fig. 4:inside of 20c) and an outer diameter (e.g. Fig. 4: outside of 20c), between the acoustic transmitter (e.g. Fig. 4:10a) and the acoustic receiver (e.g. Fig. 4: 10d) for attenuating the acoustic signals in the body (Fig. 6:20) within a predetermined frequency range (e.g. Col. 8: 22); wherein the attenuator comprises a plurality of spaced-apart masses (e.g. Fig. 4:20c; Fig. 6:20c; Col. 8:13-26) having a predetermined spacing, mass and length, attached to an external surface of an outer wall of the cylindrical portion of the body (e.g. Fig. 4:10c; Col. 5:13-16).

Hoyle et al do not teach the masses being spaced asymmetrically. Gill et al teach a plurality of masses asymmetrically spaced apart (Fig. 12B: 142 containing 150). It would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the apparatus taught by Hoyle to arrange the masses

asymmetrically as taught by Gill et al. The advantage of this would be the ability to reduce tube wave propagation due to the masses being in a multiplicity of locations.

Claim 27: Hoyle et al and Gill et al teach the limitations of claim 26. Referring to claim 27, Hoyle et al teach the attenuator comprises a plurality of spaced apart masses wherein the predetermined frequency range comprises 10khz to 20 kHz (e.g. Col. 8:22-26).

Claim 28: Hoyle et al and Gill et al teach the limitations of claim 26. Referring to claim 28, Hoyle et al teach the attenuator comprises a plurality of spaced apart masses wherein material of the masses is selected from the group consisting of steel rings and tungsten rings (e.g. Fig. 4: 6 steel mass loading rings).

Claim 29: Hoyle et al and Gill et al teach the limitations of claim 26. Referring to claim 29, Hoyle et al teach conveying the logging tool on a drilling tubular (e.g. Fig. 1: string extending from truck).

Claims 30: Hoyle et al and Gill et al teach the limitations of claim 26. Referring to claim 29, Hoyle et al teach performing acoustic investigations during drilling of the wellbore (e.g. Col. 1:9-14).

Allowable Subject Matter

8. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 10-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are: Gill et al (US 5,936,913), H.M. Lang (US 3,380,551), and Curan (US 4,481,612). Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (571) 272-2069. The examiner can normally be reached on Mon.- Fri. from 8 am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (571) 272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Renata McCloud
Examiner
Art Unit 2837

RDM


ROBERT NAPPI
SUPERVISORY PATENT EXAMINER